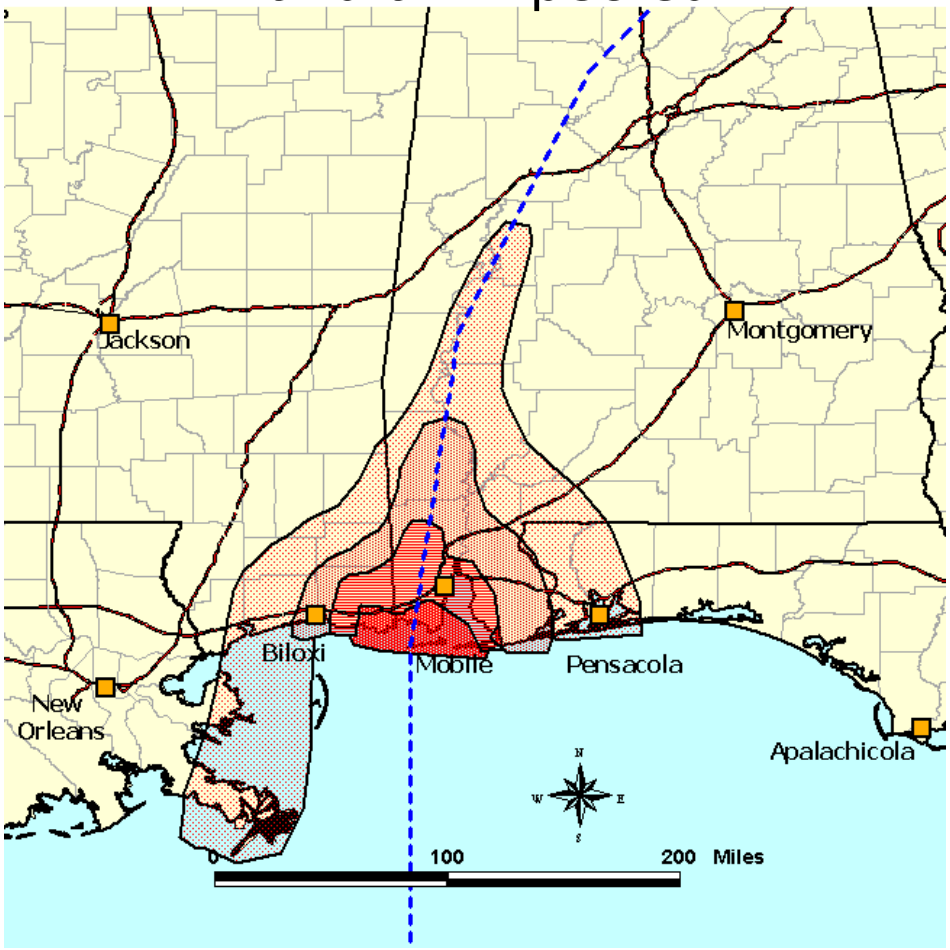
Hurricane Ivan Wind Distribution

Landfall Expected Within **12** Hours

For Official Use Only!



Most Probable Landfall Wind Distribution

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 EDT 09/15/2004)*** forecast.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Wind Field

Sources:
HURREVAC
LRL-DEBRIS

CELRL-OP GIS Group

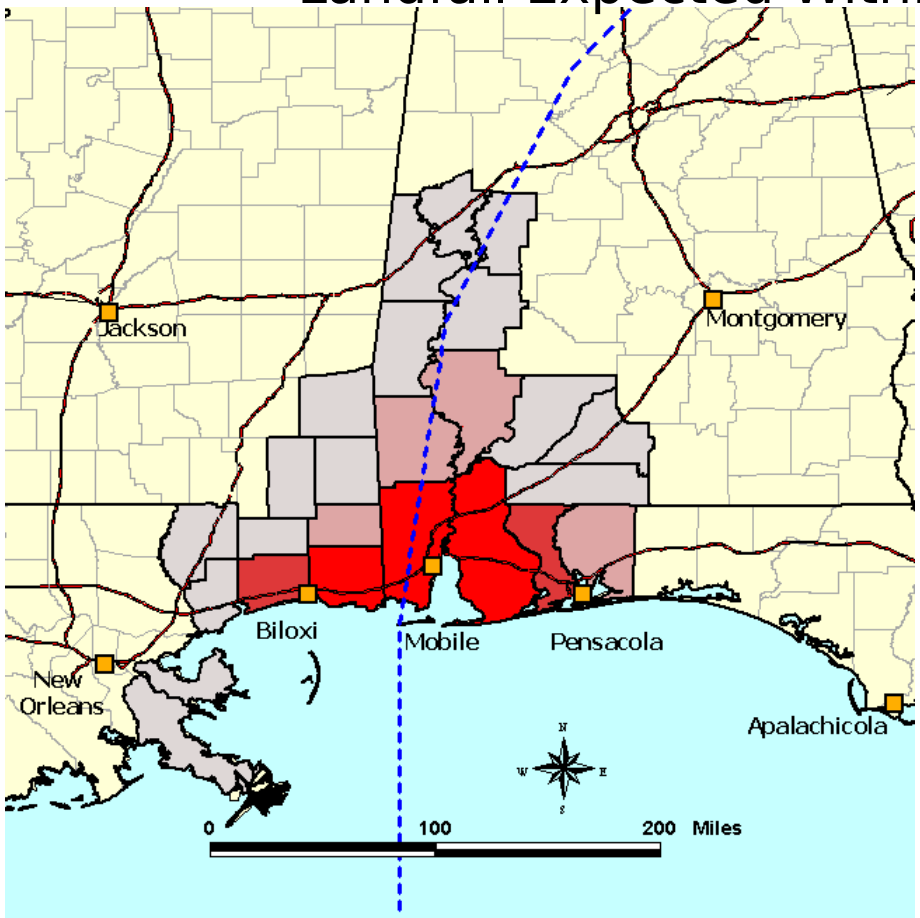
Generated By:
Terry Siemsen

Generated Date:
1730 EDT
09/15/2004

Hurricane Ivan Debris Model

Landfall Expected Within **12** Hours

For Official Use Only!



Most Probable Landfall Debris Model Results

Alabama – 13,983,000 yd^3
Mississippi – 5,957,000 yd^3
Florida – 840,000 yd^3
Louisiana – 17,000 yd^3

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 EDT 09/15/2004)*** forecast.

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Debris Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date:
1730 EDT
09/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Debris Model

Landfall Expected Within **12** Hours

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State	Yards per State	County	Yards per County
Alabama	13,983,000		
		Baldwin	2,120,000
		Choctaw	9,000
		Clarke	105,000
		Conecuh	15,000
		Escambia	56,000
		Greene	5,000
		Hale	16,000
		Marengo	39,000
		Mobile	11,506,000
		Monroe	7,000
		Sumter	3,000
		Washington	102,000
Florida	840,000		
		Escambia	603,000
		Santa Rosa	237,000
Louisiana	17,000		
		Plaquemines	16,000
		St Bernard	1,000
Mississippi	5,957,000		
		George	132,000
		Greene	19,000
		Hancock	72,000
		Harrison	880,000
		Jackson	4,827,000
		Pearl River	1,000
		Perry	2,000
		Stone	23,000
		Wayne	1,000
TOTAL	20,797,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at https://englink.usace.army.mil or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Debris Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date:
1730 EDT
09/15/2004

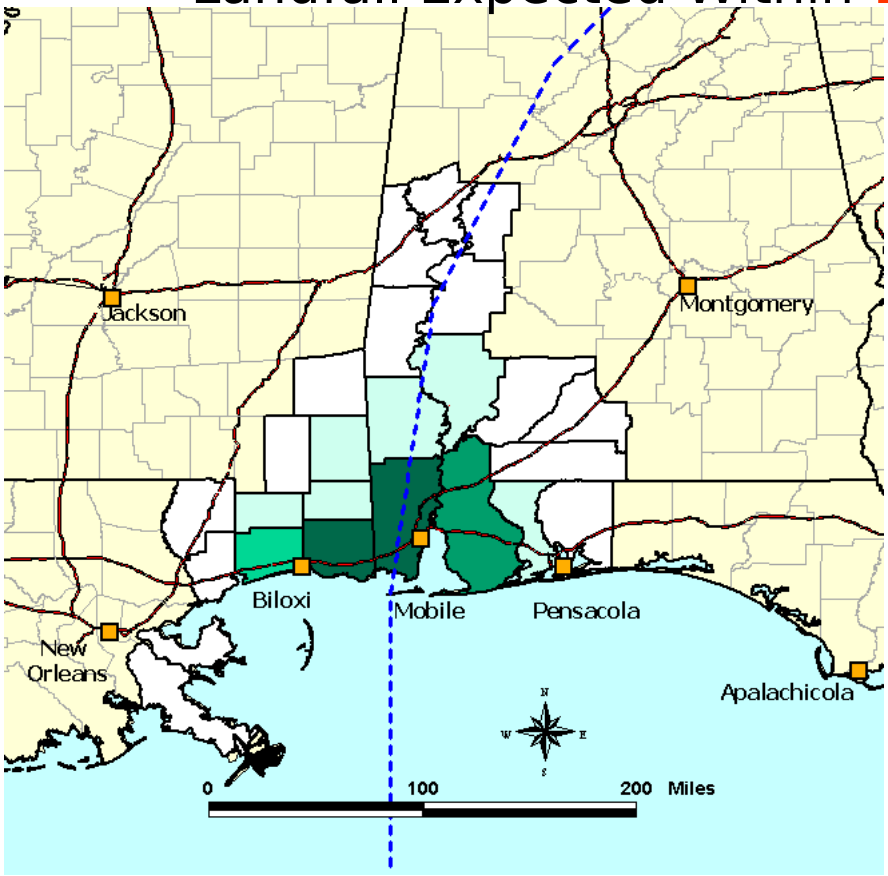
CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Ice Model

Landfall Expected Within **12** Hours

For Official Use Only!



Most Probable Landfall Ice Model Results

Alabama – 2,149,000 pounds
Mississippi – 700,000 pounds
Florida – 12,000 pounds

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 EDT 09/15/2004)*** forecast. The intensity of this hurricane has been altered to complete model runs.

The amount of ice forecasted is based on Mission Guide Book requirements (8 pounds per day per person) and Ice SME input and represents a first day daily need.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Ice Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
09/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Ice Model

Landfall Expected Within **12** Hours

For Official Use Only!

State	Pounds per State	County	Pounds per County
Alabama	2,149,000		
		Baldwin	423,000
		Clarke	4,000
		Mobile	1,694,000
		Washington	28,000
Florida	12,000		
		Escambia	12,000
Mississippi	700,000		
		George	23,000
		Greene	< 1,000
		Harrison	155,000
		Jackson	521,000
		Stone	< 1,000
TOTAL	2,861,000		

The amount of ice forecasted is based on Mission Guide Book requirements (8 pounds per person) and Ice SME input and represents a first day daily need. The assumption in this scenario is that 60% of the resident population affected by Ivan will have power outage in this area will cause a need for ice.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Ice Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
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Generated Date
1730 EDT
09/15/2004

CELRL-OP GIS Group

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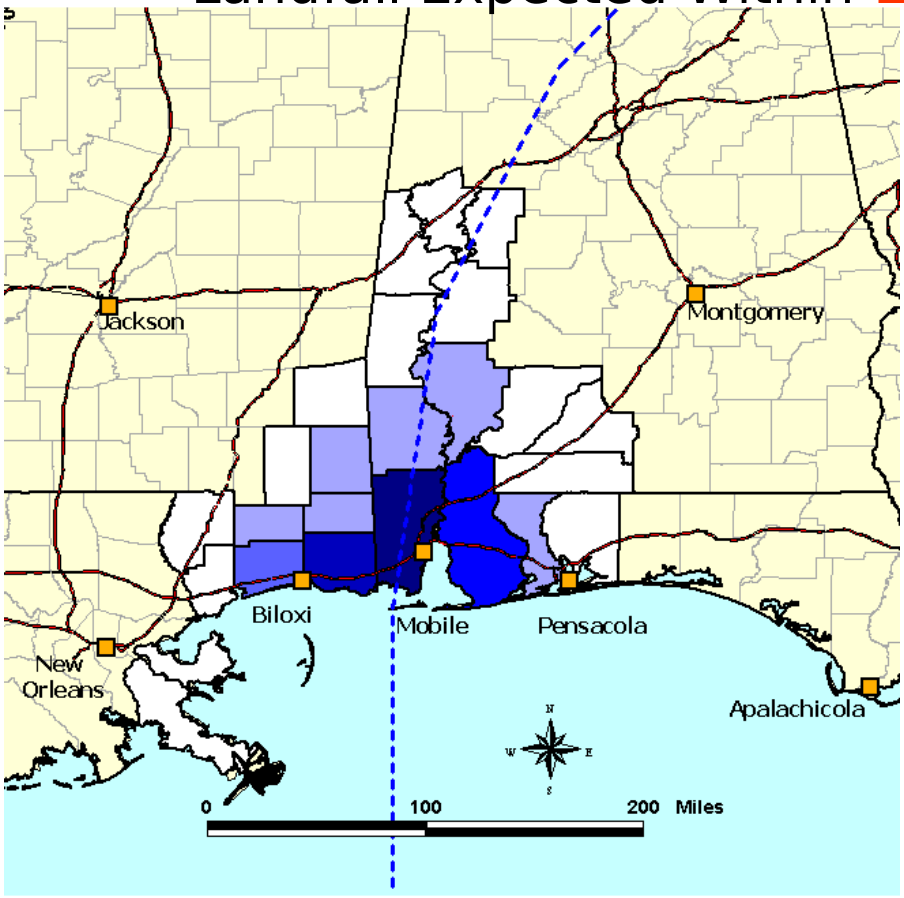
Hurricane Ivan Water Model

Landfall Expected Within **12** Hours

For Official Use Only!



Most Probable Landfall Water Model Results

Alabama – 1,075,000 Liters
Mississippi – 350,000 Liters
Florida – 6,000 Liters

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 EDT 09/15/2004)*** forecast.

The amount of water forecasted is based on Mission Guide Book requirements (4 liters per person per day) and Water SME input and represents a first day daily need.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Water Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
09/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Water Model

Landfall Expected Within **12** Hours

For Official Use Only!

State	Liters per State	County	Liters per County
Alabama	1,075,000		
		Baldwin	212,000
		Clarke	2,000
		Mobile	847,000
		Washington	14,000
Florida	6,000		
		Escambia	6,000
Mississippi	350,000		
		George	11,000
		Greene	<1,000
		Harrison	78,000
		Jackson	261,000
		Stone	<1,000
TOTAL	1,431,000		

The amount of water forecasted is based on Mission Guide Book requirements (4 liters per person) and Water SME input and represents a first day daily need. The assumption in this scenario is that 60% of the resident population affected by Ivan will have power outage in this area will cause a need for water.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Water Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
09/15/2004

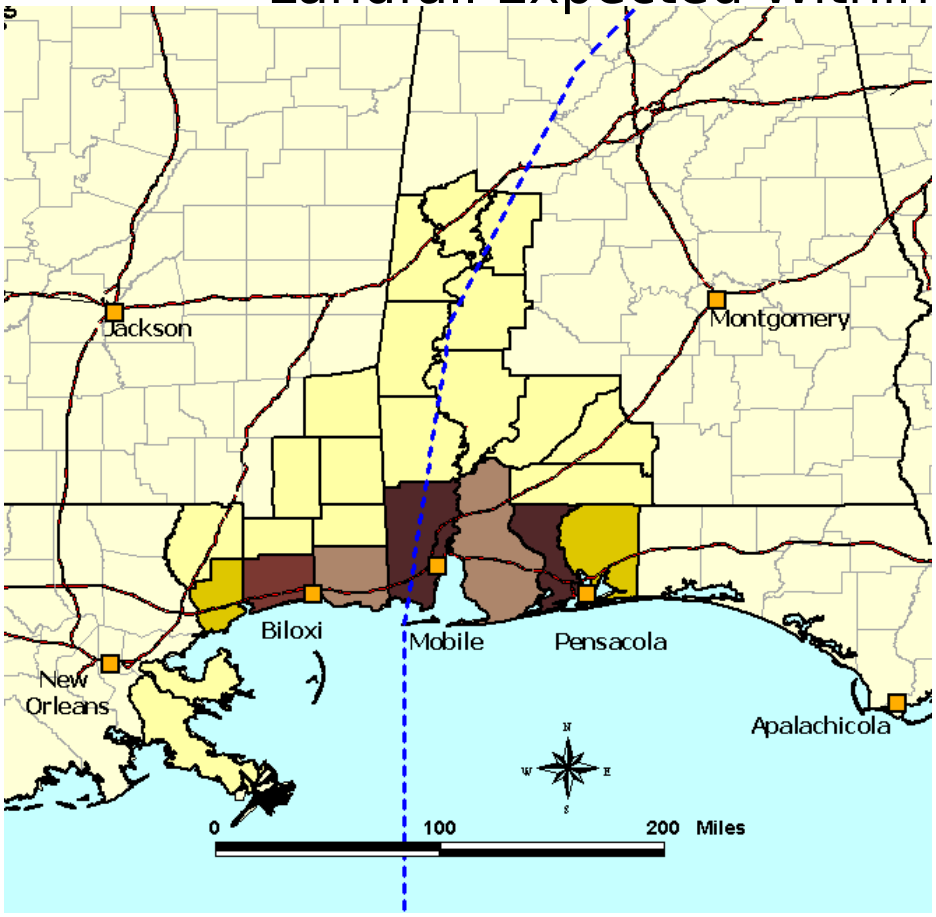
CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Population Model

Landfall Expected Within **12** Hours

For Official Use Only!



Most Probable Landfall Population Model Results

Alabama – 644,000 persons
Mississippi – 393,000 persons
Florida – 393,000 persons
Louisiana – 8,000 persons

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 EDT 09/15/2004)*** forecast.

The number of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values).

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Population Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
09/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Population Model

Landfall Expected Within **12** Hours

For Official Use Only!

State	Population per State	County	Population
Alabama	644,000		
		Baldwin	142,000
		Choctaw	4,000
		Clarke	24,000
		Conecuh	< 1,000
		Escambia	23,000
		Greene	< 1,000
		Hale	10,000
		Marengo	19,000
		Mobile	400,000
		Monroe	5,000
		Sumter	< 1,000
		Washington	17,000
Florida	393,000		
		Escambia	295,000
		Santa Rosa	98,000
Louisiana	8,000		
		Plaquemines	8,000
		St Bernard	< 1,000
Mississippi	393,000		
		George	20,000
		Greene	9,000
		Hancock	32,000
		Harrison	189,000
		Jackson	132,000
		Pearl River	< 1,000
		Perry	< 1,000
		Stone	11,000
		Wayne	< 1,000
TOTAL	1,438,000		

The number of persons estimated to be within hurricane force winds comes from Census 2000 values.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Population Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
09/15/2004

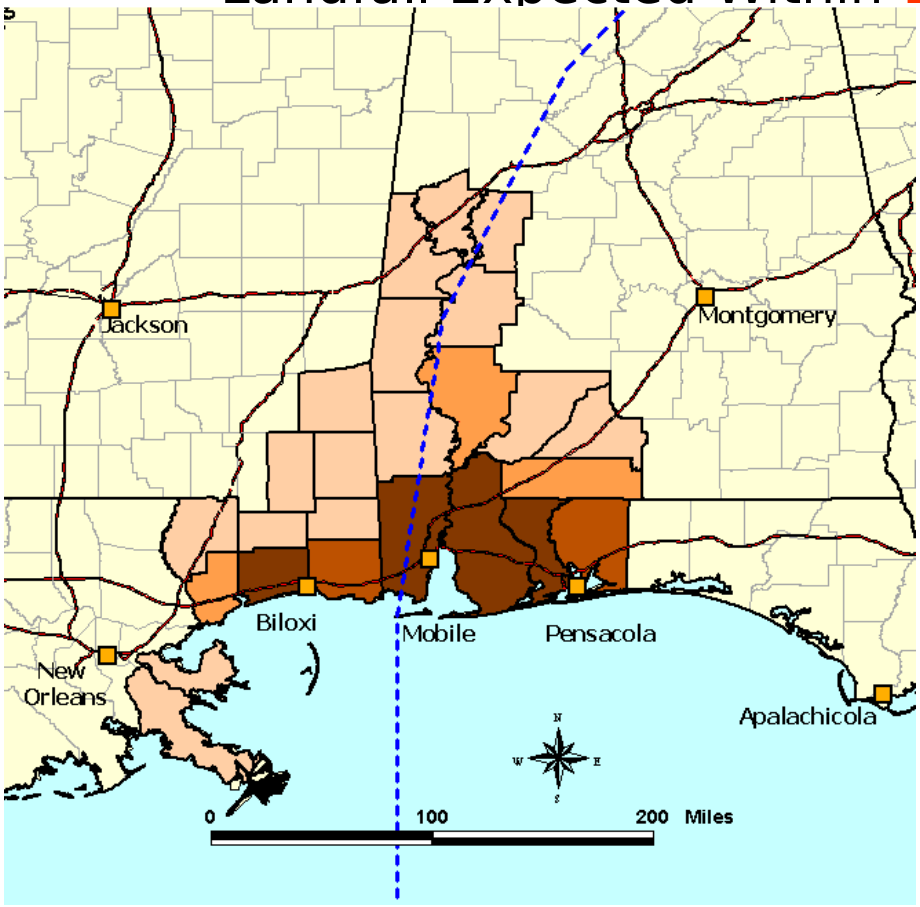
CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Households Model

Landfall Expected Within **12** Hours

For Official Use Only!



Most Probable Landfall Households Model Results

Alabama – 246,000 households
Mississippi – 147,000 households
Florida – 148,000 households
Louisiana – 3,000 households

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 EDT 09/15/2004)*** forecast.

The number of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values).

Details about this model may be obtained at **https://englink.usace.army.mil** or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Households Model

Sources: HURREVAC, LRL-DEBRIS

Generated By: Terry Siemsen

Generated Date 1730 EDT 09/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan Households Model

Landfall Expected Within **12** Hours

For Official Use Only!

State	Households per State	County	Households
Alabama	246,000		
		Baldwin	56,000
		Choctaw	2,000
		Clarke	9,000
		Conecuh	< 1,000
		Escambia	8,000
		Greene	< 1,000
		Hale	4,000
		Marengo	8,000
		Mobile	150,000
		Monroe	2,000
		Sumter	< 1,000
		Washington	7,000
Florida	148,000		
		Escambia	111,000
		Santa Rosa	37,000
Louisiana	3,000		
		Plaquemines	3,000
		St Bernard	< 1,000
Mississippi	147,000		
		George	7,000
		Greene	3,000
		Hancock	13,000
		Harrison	72,000
		Jackson	48,000
		Pearl River	< 1,000
		Perry	< 1,000
		Stone	4,000
		Wayne	< 1,000
TOTAL	544,000		

The number of households estimated to be within hurricane force winds comes from Census 2000 values.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Households Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
09/15/2004

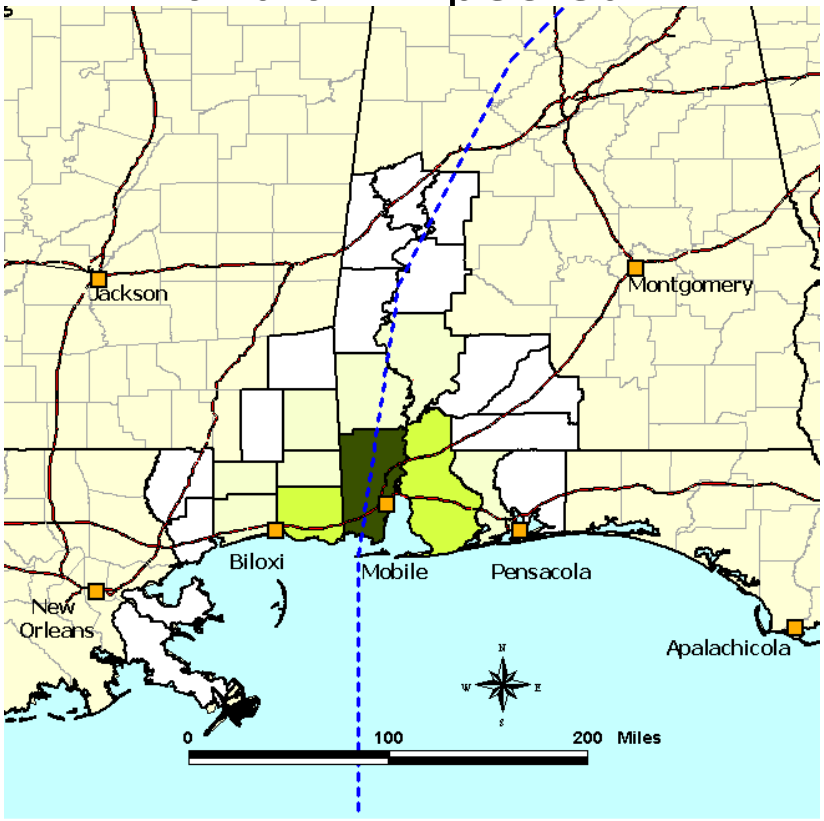
CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan
Temporary Roofing Model Results

For Official Use Only!

Landfall Expected Within **12** Hours



Temporary Roofing Model Results

Alabama – 15,300
Mississippi – 5,100
Florida – < 1,000

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile, AL.

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700EDT 9/15/2004)*** forecast.

The amount of temporary roofing that may be required is based on no roofing need in CAT 1 wind areas, no roofing need in CAT 2 wind areas, 4% of housing units damaged in CAT 3 wind areas, and 8% of housing units damaged in CAT 4 wind areas. This only indicates possible need – not necessarily a mission to repair roofs.

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan Temp Roofing Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
9/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan
Temporary Roofing Model Results

For Official Use Only!

Landfall Expected Within **12** Hours

State	Structures per County	County	Structures
Alabama	15,300		
		Baldwin	3,000
		Clarke	100
		Mobile	12,000
		Washington	200
Florida	< 1,000		
		Escambia	100
Mississippi	5,100		
		George	100
		Jackson	4,000
		Harrison	1,000
Total	20,400		

THIS IS AN EXPERIMENTAL MODEL !! THE VALUES ARE PRELIMINARY AND SHOULD BE CONSIDERED A GUIDE BUT NOT AN ABSOLUTE VALUE !!

The amount of temporary roofing that may be required is based on no roofing need in CAT 1 wind areas, no roofing need in CAT 2 wind areas, 4% of housing units damaged in CAT 3 wind areas, and 8% of housing units damaged in CAT 4 wind areas. This only indicates possible need – not necessarily a mission to repair roofs.

Details about this model may be obtained at
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or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan emp Roofing Model

Sources:
HURREVAC
LRL-DEBRIS

Generated By:
Terry Siemsen

Generated Date
1730 EDT
9/15/2004

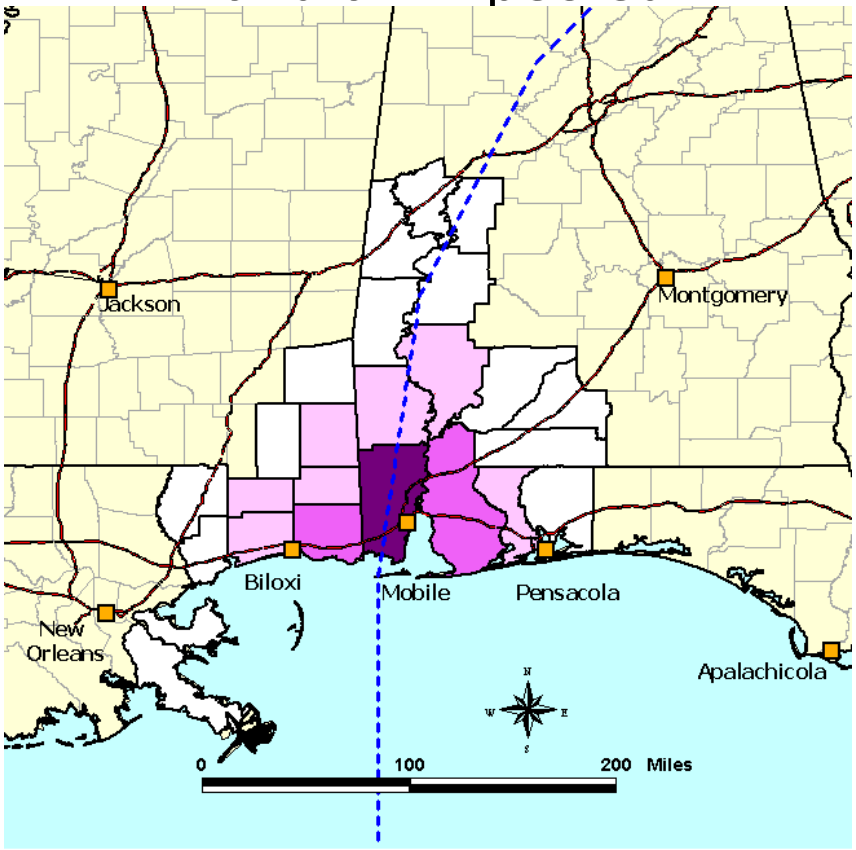
CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan
Temporary Housing Model Results

For Official Use Only!

Landfall Expected Within **12** Hours



Most Probable Landfall Temporary Housing Model Results

Alabama – 11,000 structures
Mississippi – 4,000 structures
Florida – < 1,000 structures

Model results per county on following page

This hurricane scenario is based on a Category 4 storm making landfall in near proximity to Mobile

Information provided on this page displays the most probable hurricane track based on information from the National Hurricane Center (NHC). These projections are based on information from the NHC ***(1700 9/15/2004)*** forecast.

The amount of temporary housing that may be required is based on no housing need in CAT 1 wind areas, no housing need in CAT 2 wind areas, 4% of housing units lost in CAT 3 wind areas, and 8% of housing units lost in CAT 4 wind areas

Details about this model may be obtained at
https://englink.usace.army.mil
or contact ENGLink at 1-877-936-4546

US Army Corps of Engineers

Hurricane Ivan emp Housing Model

Sources:
HURREVAC
LRL-DEBRIS

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9/15/2004

CELRL-OP GIS Group

Louisville Operations Division GIS

Hurricane Ivan
Temporary Housing Model Results

For Official Use Only!

Landfall Expected Within **12** Hours

State	Structures per State	County	Structures
Alabama	11,000		
		Baldwin	2,000
		Clarke	100
		Mobile	9,000
		Washington	100
Florida	< 1,000		
		Escambia	100
Mississippi	4,000		
		George	100
		Jackson	3,000
		Harrison	1,000
Total	15000		

THIS IS AN EXPERIMENTAL MODEL !! THE VALUES ARE PRELIMINARY AND SHOULD BE CONSIDERED A GUIDE BUT NOT AN ABSOLUTE VALUE !!

The amount of temporary housing that may be required is based on no housing need in CAT 1 wind areas, 2% of housing units lost in CAT 2 wind areas, 6% of housing units lost in CAT 3 wind areas, and 10% of housing units lost in CAT 4 wind areas

Details about this model may be obtained at
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US Army Corps of Engineers

Hurricane Ivan emp Housing Model

Sources:
HURREVAC
LRL-DEBRIS

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